

REMARKS

Applicants respectfully request reconsideration of the present U.S. Patent application as amended herein. Claim 18 has been cancelled without prejudice. Claims 1, 3, 9, 11, 19-21, and 28-30 have been amended. Therefore, claims 1-17, 19-21, and 28-30 are pending.

Objections to the Specification and Drawings

The Office Action states that there is a feature recited in claim 18 that is not shown in the specification and drawings. Claim 18 has been cancelled from the present application. Therefore, the objections regarding claim 18 are moot.

Claim Rejections - 35 U.S.C. § 102

Claims 1 and 4 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Publication No. US 2004/0101227 issued to Takabayashi et al. Claim 1 has been amended.

Claim 1, as amended, recites the following:

a first optical waveguide disposed in a semiconductor material layer, the first optical waveguide including a first charge layer;

a second optical waveguide disposed in the semiconductor material layer, the second optical waveguide including a second charge layer; and

an insulating region disposed between the first and second optical waveguides to provide a coupling region in the semiconductor material layer between the first and second optical waveguides, the first charge layer and the second charge layer formed proximate to the insulating region, the coupling region having a first coupling length for a first polarization mode of an optical beam directed through one of the first and second optical waveguides into the coupling region, the coupling region having a second coupling length for a second polarization mode of the optical beam.

Takabayashi discloses a polarization dispersion compensating apparatus. Takabayashi does not disclose first and second optical waveguides that each comprise a charge layer formed proximate to an insulating region that is disposed between the first and second optical

waveguides. These limitations are recited in claim 1. Therefore, Applicants submit that Takabayashi does not anticipate claim 1.

Claim 4 is a dependent claim and distinguishes for at least the same reasons as its independent base claim 1 in addition to adding further limitations of their own. Therefore, Applicants submit that Takabayashi does not anticipate claim 4 for at least the reasons set forth above.

Claims 1, 2, 5-12, 14-17, 19-21, and 28-30 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Publication No. US 2002/0025103 issued to Thaniyavarn.

As discussed above, claim 1 recites first and second optical waveguides that each comprise a charge layer formed proximate to an insulating region that is disposed between the first and second optical waveguides. Claims 11, 19, and 28 recite similar limitations.

Thaniyavarn discloses a balanced bridge interferometer type switch where the input and output directional couplers are asymmetrically biased to induce a certain difference in propagation constants between the two waveguides in the directional couplers. Thaniyavarn does not disclose first and second optical waveguides that each comprise a charge layer formed proximate to an insulating region that is disposed between the first and second optical waveguides. These limitations are recited in claims 1, 11, 19 and 28. Therefore, Applicants submit that claims 1, 11, 19 and 28 are not anticipated by Thaniyavarn.

Claims 2-10, 12-17, 20-21, and 29-30 are dependent claims and distinguish for at least the same reasons as their independent base claim in addition to adding further limitations of their own. Therefore, Applicants submit that Thaniyavarn does not anticipate claims 2-10, 12-17, 20-21, and 29-30 for at least the reasons set forth above.

Claim Rejections - 35 U.S.C. § 103

Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Publication No. US 2002/0025103 issued to Thaniyavarn.

As discussed above, Thaniyavarn does not disclose first and second optical waveguides that each comprise a charge layer formed proximate to an insulating region that is disposed between the first and second optical waveguides. These limitations are recited in claim 1. Therefore, Applicants submit that claim 1 is patentable over Thaniyavarn. Claim 3 is a dependent claim and distinguishes for at least the same reasons as its independent base claim 1 in addition to adding further limitations of their own. Therefore, Applicants submit that claim 3 is patentable over Thaniyavarn for at least the reasons set forth above.

Claim 18 is rejected under 35 U.S.C. §103(a) as being unpatentable over Thaniyavarn in view of U.S. Patent No. 5,502,781 issued to Li et al. Claim 18 has been cancelled from the present application. Therefore, the rejection of claim 18 is moot.

Conclusion

In view of the amendments and remarks set forth above, Applicants submit that claims 1-17, 19-21, and 28-30 are in condition for allowance and such action is respectfully solicited. The Examiner is respectfully requested to contact the undersigned by telephone if it is believed that such contact would further the examination of the present application.

Please charge any shortages and credit any overcharges to our Deposit Account number
02-2666.

Respectfully submitted,
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Date: 6/8/05

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